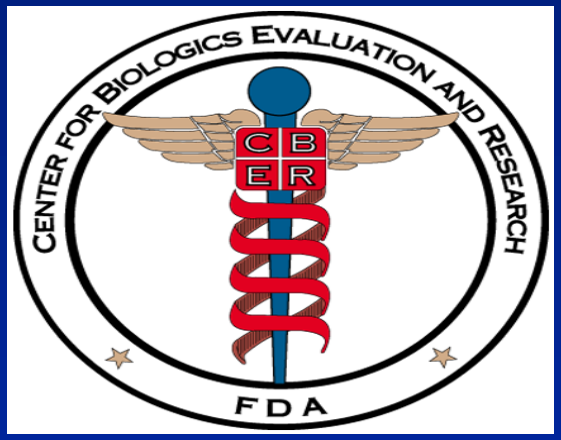

The Investigational New Drug (IND) Process

An Overview

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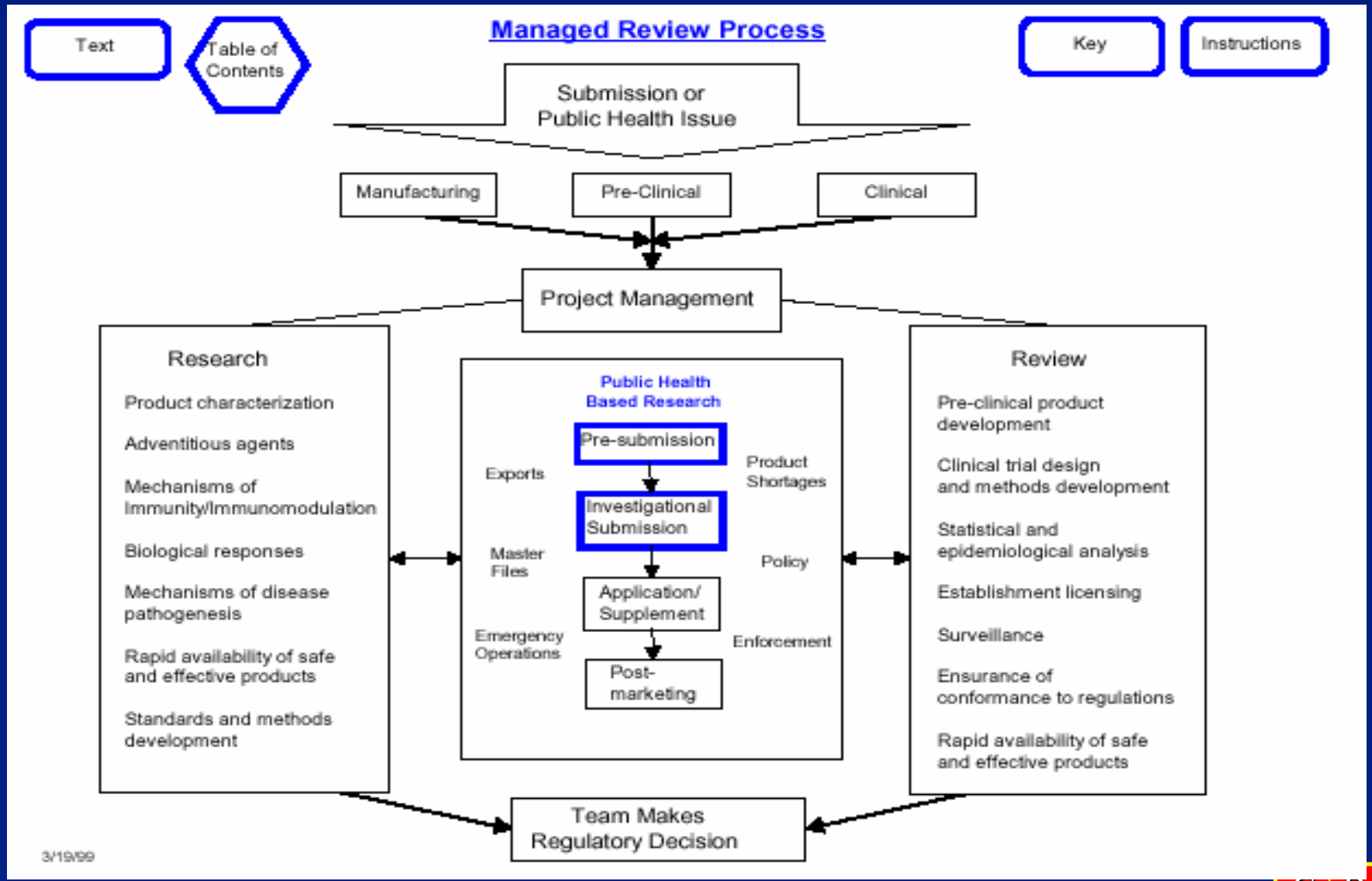
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What is an Investigational New Drug Exemption (IND)?

- **Only approved drugs may be shipped interstate**
- **Therefore, an application for an exemption to the law is required in order to ship an unapproved biologic (interstate) for the purpose of conducting clinical investigations of that biologic (drug).**

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IND Regulatory Authority

- **BIOLOGICS**
  - Investigational New Drug Exemptions (IND, 21 CFR 312)
- **EXAMPLES**
  - Vaccines and allergenic products
  - Therapeutic biologics, e.g., interferon
  - Blood Products (including blood grouping reagents and donor screening tests for bloodborne pathogens)
  - Cellular & gene therapies, xenotransplantation)

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Who Submits a IND ?

- **Sponsor**
  - **Commerical, e.g., drug company**
  - **Research, individual physician**
- **Generally requests a Pre-IND meeting with FDA get feedback on overall study.**

What is in an IND?

- Form FDA 1571(cover sheet) or CTD format
- Sponsor Information
- Investigator information (Form 1572)
- Product/Manufacturing safety information
- Pre-clinical studies (pharm/tox)
- Proposed clinical studies (Phase I or II or III)
- Labeling

IND – Product/Manufacturing Information

- Source material / raw materials
- Manufacturing process and controls
- Formulation
- Contamination/cross-contamination information
- Environmental assessment or categorical exclusion

PHASE 1

- Initial introduction into humans (5-20)
- Dose ranging
- Closely monitored
- Safety, pharmacokinetics
- Activity

PHASE 2

- Controlled clinical trials
- Effectiveness (preliminary)
- Closely monitored
- Relatively small numbers (100’s)

PHASE 3

- Evaluate risk-benefit relationship
- Larger studies (100’s - 1000’s)
- Controlled
- Pivotal

Responsibility of Sponsors

- **Selected qualified investigators**
  - **“shall select only investigators qualified by training and experience as appropriate experts”**
- **Provide information needed to properly conduct the study (Investigator Brochure)**
- **Ensure proper study monitoring**

Responsibility of Sponsors

- Ensure the study is in accordance with the general investigational plan
- Ensure that FDA and all participating investigators are promptly informed or significant new adverse effects or risks.

Responsibility of Investigators

- Follow the study protocol
- Control of distribution/use of the drug
- Record keeping and retention
- Reports
- Assurance of IRB review

Human Subject Protection

- **Except as provided in 50.23 and 50.24, no investigator may involve a human being as a subject in research covered by these regulations unless the investigator has obtained the legally effective informed consent.**

Human Subject Protection

- Sufficient opportunity for the subject to consider whether or not to participate
- Minimize the possibility of coercion or undue influence
- Information in language understandable to the subject
- No exculpatory language… to waive legal rights… or to release the investigator… from liability for negligence.

Responsibilities of the Institutional Review Board (IRB)

- Assures risks to subjects are minimized and reasonable
- Selection of subjects is equitable
- Informed consent will be sought and adequately documented

Clinical Hold – Phase 1

- Subjects exposed to an unreasonable and significant risk of illness or injury
- Clinical investigator is not qualified
- Investigator's Brochure is misleading, erroneous or materially incomplete
- IND does not contain sufficient information to assess risk

Clinical Hold – Phase 2 or 3

- **All the Phase 1 reasons**
- **Protocol is clearly deficient in design to meet its stated objectives**

Treatment IND

- Serious or immediately life threatening disease
- No comparable or alternative therapy
- Actively pursuing market approval
- File safety reports
- Maintain adequate manufacturing facilities
- Begin after FDA approval

Emergency Use IND

- Can be by phone
- Must otherwise comply with IND regulations
- Generally follow-up by submitting an IND